



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) **EP 1 431 267 A1**

(12) **EUROPEAN PATENT APPLICATION**
published in accordance with Art. 158(3) EPC

(43) Date of publication:
23.06.2004 Bulletin 2004/26

(21) Application number: **02755874.1**

(22) Date of filing: **08.08.2002**

(51) Int Cl.7: **C07C 57/40, C07C 57/44,**
C07C 69/736, C07C 229/34,
C07C 233/47, C07C 233/55,
C07C 233/65, C07C 233/81,
C07C 233/87, C07C 235/38,
C07C 235/42, C07C 235/46,
C07C 235/48, C07C 235/54,
C07C 235/56, C07C 237/30,
C07C 239/18

(86) International application number:
PCT/JP2002/008120

(87) International publication number:
WO 2003/016254 (27.02.2003 Gazette 2003/09)

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
IE IT LI LU MC NL PT SE SK TR
Designated Extension States:
AL LT LV MK RO SI

(30) Priority: **09.08.2001 JP 2001241867**

(71) Applicant: **ONO PHARMACEUTICAL CO., LTD.**
Osaka-shi, Osaka 541-8526 (JP)

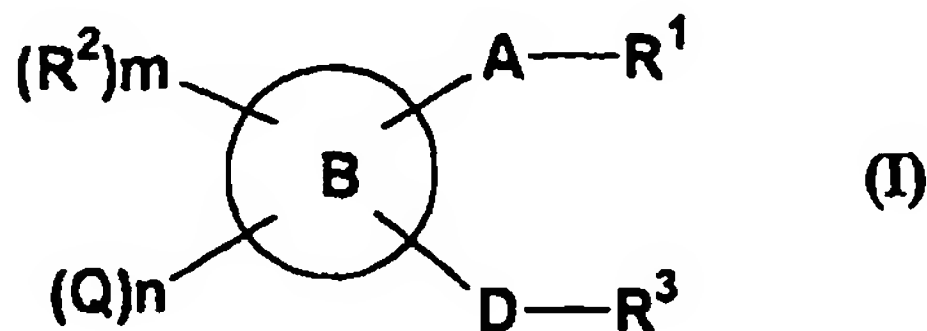
(72) Inventors:
• **TANI, Kousuke**
Mishima-gun, Osaka 618-8585 (JP)

- **ASADA, Masaki**
Mishima-gun, Osaka 618-8585 (JP)
- **KOBAYASHI, Kaoru**
Mishima-gun, Osaka 618-8585 (JP)
- **NARITA, Masami**
Mishima-gun, Osaka 618-8585 (JP)
- **OGAWA, Mikio**
Mishima-gun, Osaka 618-8585 (JP)

(74) Representative: **Henkel, Feller & Hänzel**
Möhlstrasse 37
81675 München (DE)

(54) **CARBOXYLIC ACID DERIVATIVE COMPOUNDS AND DRUGS COMPRISING THESE COMPOUNDS AS THE ACTIVE INGREDIENT**

(57) A carboxylic acid derivative of formula (I):



wherein R¹ is -COOH, -COOR⁶, etc.; A is a single bond, alkylene, etc.; R² is alkyl, alkoxy, etc.; B is a carbocyclic ring or a heterocyclic ring; Q is alkylene-Cyc₂, etc.; D is a linking chain; and R³ is alkyl, a carbocyclic ring or a heterocyclic ring, or a non-toxic salt thereof. The compound of formula (I) binds to PGE₂ receptor, especially subtypes EP₃ and/or EP₄ and show the antagonizing activity, are useful for the prevention and/or treatment of diseases induced pain, itch, urticaria, allergy, urinary frequency, urinary disturbance, Alzheimer's disease, cancer, dysmenorrhea, endometriosis, etc.

EP 1 431 267 A1